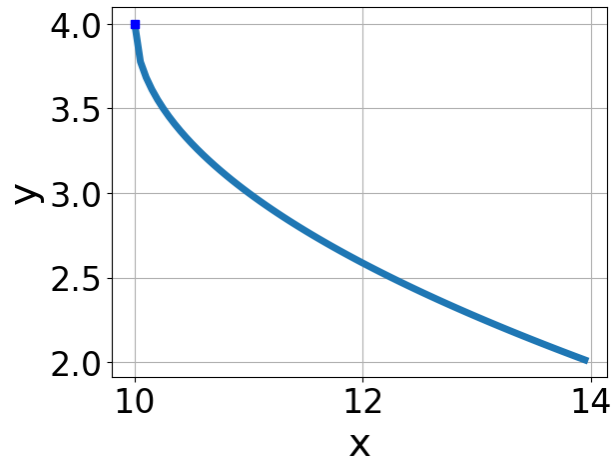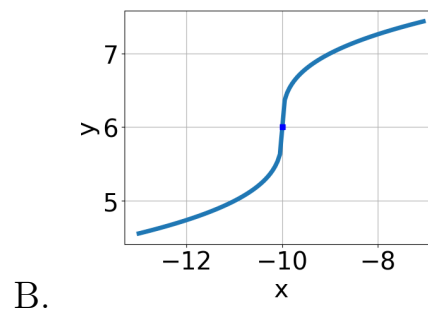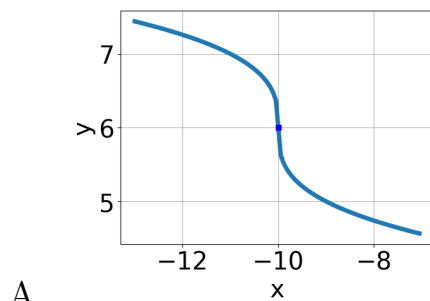1. Choose the equation of the function graphed below.
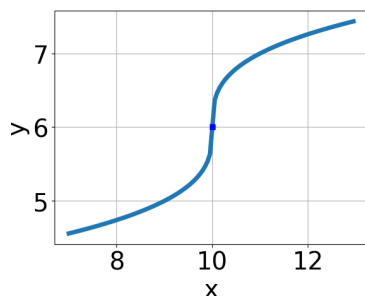

  A. $f(x) = -\sqrt[3]{x - 10} + 4$

  B. $f(x) = \sqrt[3]{x - 10} + 4$

  C. $f(x) = \sqrt[3]{x + 10} + 4$

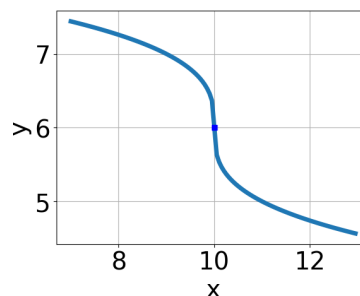 D. $f(x) = -\sqrt[3]{x + 10} + 4$

  E. None of the above

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2. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x - 10} + 6$$

 A.   B.

C.

D.

E. None of the above.

3. What is the domain of the function below?

$$f(x) = \sqrt[6]{5x + 9}$$

A. $(-\infty, \infty)$

B. $(-\infty, a]$, where $a \in [-4.5, -0.8]$

C. $(-\infty, a]$, where $a \in [-0.7, 0.6]$

D. $[a, \infty)$, where $a \in [-3.04, -0.59]$

E. $[a, \infty)$, where $a \in [-1.36, 0.62]$

---

4. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{32x^2 + 24} - \sqrt{-76x} = 0$$

A. $x \in [-1.81, -0.27]$

B. $x_1 \in [-0.14, 0.63]$ and $x_2 \in [0.4, 3.9]$

C. $x_1 \in [-2.1, -1.51]$ and $x_2 \in [-1.1, 0.2]$

D. $x \in [-2.1, -1.51]$

E. All solutions lead to invalid or complex values in the equation.

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5. Choose the equation of the function graphed below.
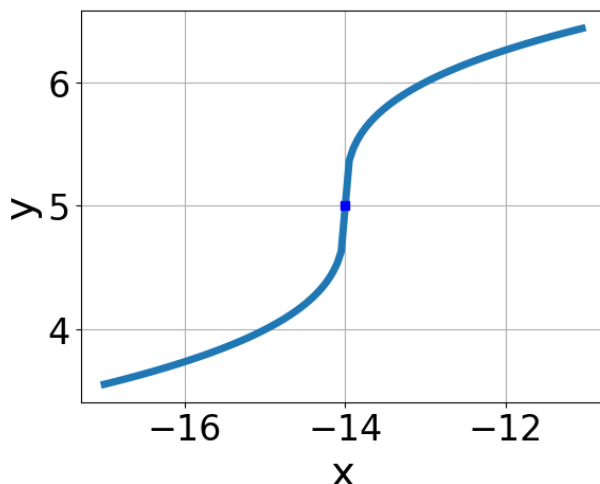
A. $f(x) = \sqrt{x + 14} + 5$

B. $f(x) = -\sqrt{x - 14} + 5$

C. $f(x) = -\sqrt{x + 14} + 5$

D. $f(x) = \sqrt{x - 14} + 5$

E. None of the above

---

6. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-6x - 7} - \sqrt{-3x + 7} = 0$$

A. $x_1 \in [-4.17, -0.17]$ and $x_2 \in [2.33, 5.33]$

B. $x \in [-0, 1]$

C. $x \in [-5.67, -1.67]$

D. $x_1 \in [-5.67, -1.67]$ and $x_2 \in [-1.17, 1.83]$

E. All solutions lead to invalid or complex values in the equation.

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7. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-48x^2 - 9} - \sqrt{-42x} = 0$$

A. $x \in [0.46, 0.53]$

B. $x_1 \in [0.36, 0.41]$ and $x_2 \in [-0.38, 1.8]$

C. All solutions lead to invalid or complex values in the equation.

D. $x \in [0.36, 0.41]$

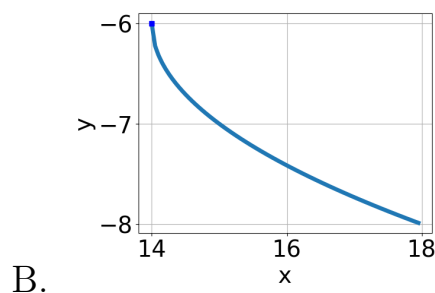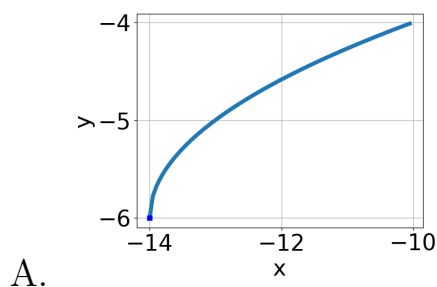E. $x_1 \in [-0.55, -0.35]$ and $x_2 \in [-1.34, -0.02]$

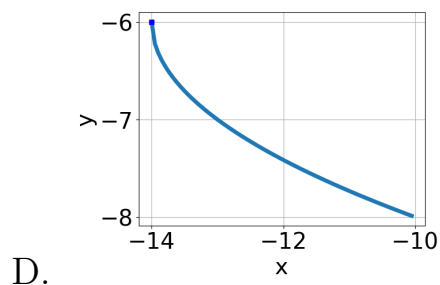8. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.
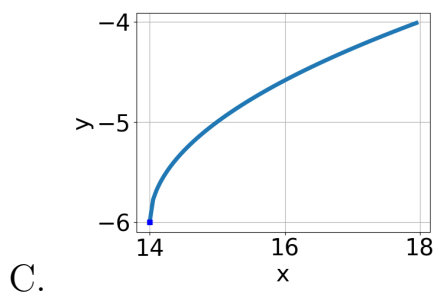
$$\sqrt{-8x - 6} - \sqrt{7x - 7} = 0$$

A. $x_1 \in [-0.78, -0.75]$ and $x_2 \in [0.83, 1.87]$

B. $x \in [-0.93, -0.76]$

C. All solutions lead to invalid or complex values in the equation.

D. $x \in [0.01, 0.41]$

E. $x_1 \in [-0.78, -0.75]$ and $x_2 \in [-0.84, 0.73]$

---

9. Choose the graph of the equation below.

$$f(x) = \sqrt{x + 14} - 6$$

A.   B.

C.

D.

E. None of the above.

---

10. What is the domain of the function below?

$$f(x) = \sqrt[3]{5x - 7}$$

A. $(-\infty, \infty)$

B. The domain is $(-\infty, a]$, where $a \in [0.5, 0.95]$

C. The domain is $(-\infty, a]$, where $a \in [1.23, 2.47]$

D. The domain is $[a, \infty)$, where $a \in [-0.9, 1.1]$

E. The domain is $[a, \infty)$, where $a \in [0.9, 2.8]$